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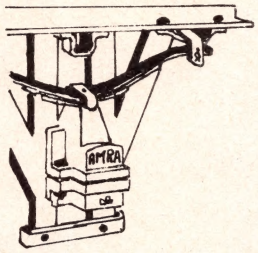

Editorial

JOURNAL BOX

THERE IS A PROTOTYPE.

How many times have you heard someone say - "But that's not prototype"? You know there is a prototype for almost anything.

The more you look around our railways, the more examples can be found. Graham Watson started the ball rolling with his photo (Journal 86 - May/June, 1970) of a WAGR GC wagon which had its prefix letters painted on as CG.

Recently I learned that SAR and WAGR between them had acquired 7 Pacific locomotives ex USA - complete with bell, preheater and all those details usually only seen on American and Canadian locomotives - and ran them as bought. They were later modified to that "Australian" look.

Looking down the yard at Lithgow from the old coaling stage it would seem that there was a left hand point where there should have been a right hand one. At Blayney yard I saw examples of "Peco" rail and sleeper built buffer stops, and a Maerklin " ground signal. In many places in NSW and Victoria one can see examples of "Airfix" water tanks and platform canopies.

I have photos, taken at Newcastle, of some of the roughest hand lettering of wagon identification numbers that have ever been seen - even on beginners models.

Continued on page 94.

COVER PHOTO

Victorian Railways latest diesel-electric rail motor, which is capable of 80 mph, operates between Ararat and Portland. Photo by courtesy of VR.

VOLUME 20 Issue 94

CONTENTS

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President's Corner

Over the past few years there has been several occasions when a few members have expressed the view -- "We should amalgamate with another Association for the greater benefit of Model Railroaders". These views have always been conveyed second or third hand and as no official approach has ever been made to the Committee of Management of this Association, no deliberations have ever occurred on this subject at Federal level.

However, recently, one State Branch of AMRA has entered into talks with the corresponding Division of the other Association with the view to bringing such an amalgamation a step nearer.

As notes of these talks have been supplied to me, I am perturbed lest other members of our Association have had these benefits presented to them and are inclined to accept them on their face value.

Briefly, these benefits are "Limited Liability" on one hand and "Property" on the other.

One side to the talks being registered under the Companies Act, puts forward the benefit that "The Liability of their members is limited", but under their own Constitution each member has agreed liability of $20 --- hardly a benefit.

On the other hand, some of our members involved in these talks have put forward the benefit of AMRA "Property" I wonder if members generally realise that AMRA property consists of two typewriters (now second-hand) and some stationery? Again I say -- hardly a benefit!

In order to prevent any further confused thinking by members along these lines, let's look at these "benefits" in the light of our own Federal Constitution.

LIABILITIES. The liabilities of members of this Association are simply to pay their subs on time so that the Federal Committee of Management can budget for a years production of Journal together with the usual stationery and postal charges. The C.O.M. does NOT buy goods on credit or dabble in property in the freehold sense, so there is little chance of members being held responsible for land or buildings.

PROPERTY. Where a State Branch is purchasing (NSW) or contemplating purchasing (VIC) property for clubrooms, each State Branch must draw up a State Constitution, which while within the framework of the Federal Constitution, nevertheless has additional clauses permitting the appointment of Trustees who are responsible for fund guaranteeing as well as being in full control of the said property. It will be noted that the liability for property rests with the State Trustees, who also have the power and rights of owners.

Constitutionally, the Federal C.O.M. that is, AMRA, cannot own or in any way control State Branch property. In this field the two States mentioned are fully autonomous.

I repeat, this subject has never come up officially at Federal Committee

level; the points made above are simply the points covered in the Constitution of AMRA.

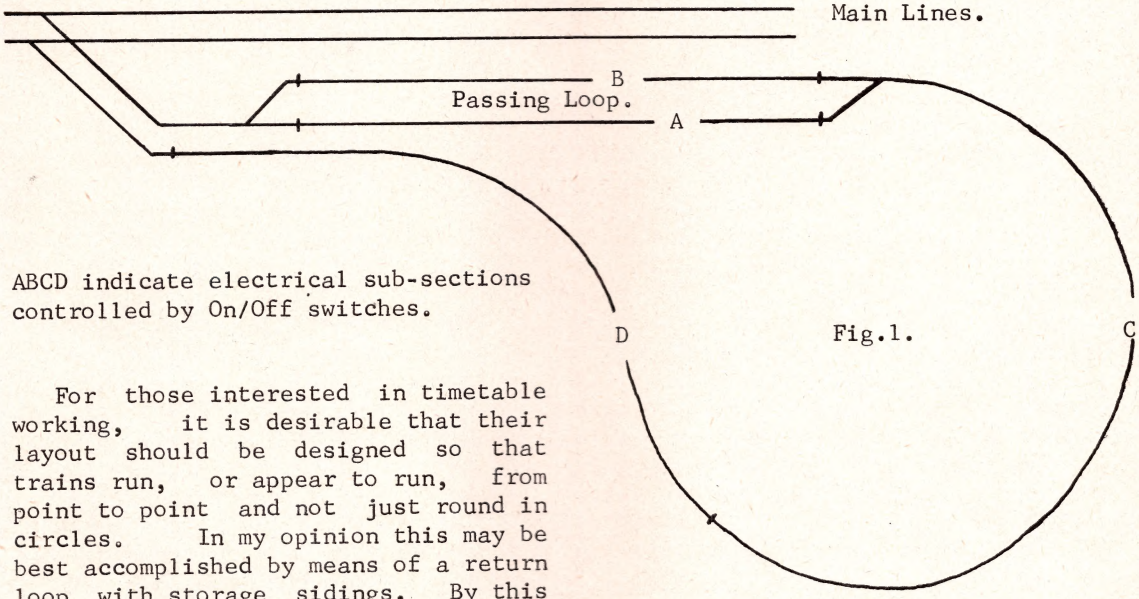
SUB-BRANCHES. And now for some official C.O.M. thoughts. Your Committee would like to see a big increase in State Sub-branches, particularly in N.S.W. For some years past, there was a need to restrict the formation of Sub-branches in certain areas. The N.S.W. State President has now informed the C.O.M. that applications to form Sub-branches will be welcomed and dealt with on their merits. The previous geographic restrictions will not necessarily apply. So let's have some activity on the membership lists, particularly Queensland and N.S.W. country and urban districts.

Make contact with members in your town or district with a view to forming a Sub-branch in your area. Keep in touch with your State Branch, they are always ready to help; in this way you will get the REAL benefits of A.M.R.A membership.

****

RETURN LOOPS

by A. TEMPLEMAN.



ABCD indicate electrical sub-sections controlled by On/Off switches.

Fig.1.

For those interested in timetable working, it is desirable that their layout should be designed so that trains run, or appear to run, from point to point and not just round in circles. In my opinion this may be best accomplished by means of a return loop with storage sidings. By this means trains may be turned and held until the time comes for their return journey.

My own layout is based on the N.S.W. South Coast line, with Wollongong (through) and Nowra (terminal) stations represented, and two return loops, one representing Sydney and the other Port Kembla and the Unanderra-Moss Vale line. A continuous circuit is included to give a longer run, for running in locos, and also to enable me to sit back sometimes and just "watch the trains go by".

The return loops are each arranged as shown in Fig.1. The return loops are divided into four electrical sections (as marked on diagram) so that up

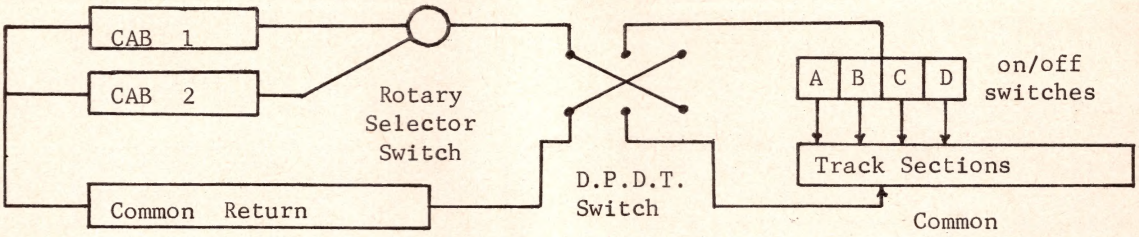


Fig.2.

to 4 trains can be stored in each loop at one time. (As yet I have not enough locos to fill both loops at once.') This arrangement can of course be varied to suit the individual layout, with more passing loops and storage sections added if desired (and if space permits).

In the case of my layout the return loops are situated beneath high level sections of the layout (which can be removed for maintenance). They are however visible to the operator, to save the complication of an indicator light system to show if sections are occupied.

The wiring system I use is shown in Fig. 2. I use cab control, with the entire layout divided into 20 main sections, each controlled by a rotary selector switch. Some of the main sections are further divided by on/off switches into sub-sections. Each return loop is wired as a separate section through a selector switch, then to a double pole double throw (DPDT) switch, then to on/off switches to isolate sub-sections, then to the track.

I use common return wiring in the layout which simplifies wiring a great deal as the common rail is bonded to some earth wire which is run right round beneath the base board and is connected to one lead from each controller. Only one wire thus passes through the selector switch to each section. (It must be remembered that a separate power supply is required for each controller when common return is used). In the return loop sections the common return must pass through the DPDT switch as well as the wire from the selector switch for that section, enabling the polarity of the two rails within the loop to be changed as desired by the DPDT switch. I hope that Fig. 2 makes this all clear.

The DPDT switches are marked "Enter Loop" (when the switch is in the position to line the polarity of the return loop tracks up with the polarity of the section leading into the loop) and "Leave Loop" (when the switch is in the position to reverse the polarity of the rails in the return loop to line up with the polarity of the section leading out of the loop.

The switches are normally kept in the "Enter Loop" position. A train enters the loop and is isolated in a sub-section. When it is desired that the train leave the loop, power is restored to the sub-section, the DPDT switch turned to "Leave Loop" reversing the polarity of the loop tracks and the controller knob turned the opposite way. When the train has left the loop the DPDT switch is restored to "Enter Loop" ready for the next train. Even if the train is not to be kept in the return loop, but is to immediately leave on the return journey, it must of course be stopped briefly in the return loop while the polarity is reversed.

Return loops are thus no problem to wire and add tremendous operational interest to your layout.

Basic Sidings & Goods Train Running

Part 2.

E.G. WATSON.

Introduction.

One problem remains after a final review of these notes, which should come first, the notes on marshalling and placing or the notes on sidings and shunting.

It would be quite possible to run a "goods" without knowing anything about marshalling and placing trucks. The whole of the moves in Part 1 could be done without any such knowledge, so we will consider marshalling and placing last.

This leaves one worry. Someone could start reading and get enthusiastic (I hope someone does) and then start building or altering their layout and finish up cursing me, after spending much money and going to a lot of trouble. Indeed this thought almost caused me to abondon the project.

A little thought showed how this could be overcome. Before showing how this is done, I will make a statement that even within the last 24 hours has caused hoots of derision for me and much discomforture to my critics.

"There are only two basic train movements and two basic shunting movements".

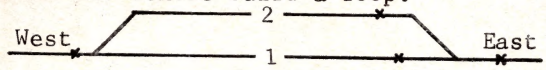
Before reaching for pen and paper, place an engine and truck on the line.

We can (1) Move train forwards.
(2) Move train backwards.
(3) Pick the truck up.
(4) Put the truck elsewhere (cut off).

Any other movements are combinations of these.

"Running around" which is an important factor in shunting, combines all these and could be considered as a separate item owing to its importance. Therefore anyone who wishes to practice any of the movements and combinations discussed could do so by:

Take a length of timber 6" wide suitable for a base board. Length possibly 6 to 7 feet. Mark the centre. From the centre build a loop.



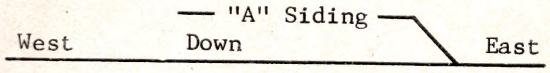
West end of points should hold minimum 3 trucks, van and engine and a couple of inches to spare. East of points should hold minimum 6 trucks, van and engine and a bit to spare. Track 2 should hold 3 trucks, minimum, with several inches to spare. We will need to be able to uncouple at X. Place buffer stops either end, a power clip and a long lead to circuit control unit and every move detailed could be made using track 2 as "A" siding. When we get to "placing" (Note 1.) more uncoupling places would be needed in "A" siding.

Note that when I say "all moves" I do not mean "all combinations of moves".

In the examples we will assume that trains are marshalled correctly and that there is sufficient room in the sidings for all moves.

Example 1.

Basic siding. Straight set down and pick up.



Here we have the simplest siding. Our goods has van 6,5,4,3,2,1 engine. It stops short of west side of points, trucks 321 are "cut off" (uncoupled) drawn forward to east side of points and "set back"(pushed) into "A" siding. They are then "cut off" and engine rejoins train, brakes are tested (Note 2) and train is ready to proceed.

This is a "straight set down".

Straight "pick up".

Engine is cut off, trucks in "A" siding picked up and placed on train.

Straight "pick up and set down".

Trucks 9,8,7 in "A" siding to be picked up.

Shunt proceeds as for "straight set down", however the trucks in "A" are coupled on and then placed on train. Then same as "straight set down".

Note 1. "Setting down" and "placing" trucks are not the same thing although the terms are often loosely used. The difference will be fully discussed later.

Note 2. As the circuit control unit acts as the train's brakes this could be overlooked, but it is essential to incorporate some form of test particularly where "Triang" type uncouplers are used. Move train back and forth for a short distance to make sure trucks are coupled up OK. Try to leave it so that the uncoupling ramp is under a truck. I like to have my trucks arranged so that at least one of the trucks to be uncoupled is similar to a Triang R648. This not only makes it easy to pick out the cut off point, but it fits right over the uncoupling ramp. We don't want a train divided in the section.

If you cannot see the uncoupling ramp try a yellow golf tee placed centrally with sufficient clearance from track to allow a clear passage for the train.

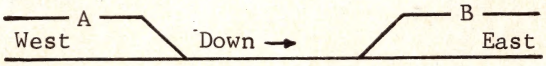
While these 3 moves are simple they must be understood and mastered, smooth operation of control unit, correct speed of engine over points, confident operation of points, quick accurate coupling and uncoupling.

Once you have mastered this, the whole operation of your goods and shunting is a combination of these moves.

Given "A" siding, 6 foot track, 12 trucks, a van and an engine, I would guarantee to tie up in knots anyone who thought we were "playing trains".

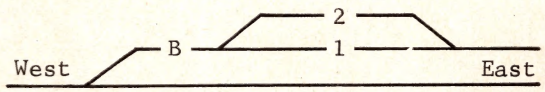
Example 2.

We now add another siding to our "yard".



Train arrives as before and shunts "A" siding. It will be readily seen that it cannot shunt"B" siding on the "down" journey, but could on the "up" journey, same as "A". This would add some interest to its return trip.

We will now add a loop to "B" allowing plenty of room at the east end.



The train having shunted "A" runs into 1. The engine is cut off, draws forward to east of points, reverses through 2 and into 1. We have now "run around" the train completing our 3rd basic move.

1. Set down. 2. Pick up. 3. Run around.

Some of the moves we can now make in "B" are·

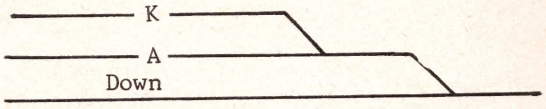
1. Set down trucks east of points on 1 with a straight push back and cut off.

2. Trucks 6,5,4 (next to van)to be set down in "B". These would be cut off, drawn clear of west end points and set down via 2.

3. Trucks 6,5,4 for "B"and 7,8,9 to be picked up, 6,5,4 pushed by engine via 2, 7,8,9 coupled up,drawn forward via 2, pushed into train (west end) and 6,5,4 set down in 3 via 2.

Example 3.

We now add "K" siding,for all practical purposes this is exactly the same as the railway diagram it was taken from.



Trucks for K next to engine. Train shunts"A" then "K". ("K" by the way is out of sight of the signalman). For 2 years the train goes into "K" trucks first, engine last. I will not detail the moves as they are similar to "A". This particular day the whole train, van first, goes into "K", comes out, guard rings from yard phone "shunt completed, ready to go". Signalman nearly has a fit. It is clear from our drawing that this impossible, yet a bogie van of machinery had been dropped off.

Fortunately there was a change of crew and the driver came over to the signal box "Haven't shunted here for 25 years and it hasn't changed much." He said. "Well how the.....did you do it?" asked the signalman. "I ran around in the loop."said the driver. So there it was a loop in a private siding that no one else knew about. It certainly hadn't been used for 2-3 years to my knowledge and no mention of it had been made in that time.

We have been considering these sidings and shunting moves on a single line track. We will shortly consider these as the "down" line on a double line track. The moves etc. for "down" shunting still apply, so will not be repeated.

Before this we will look at our diagram now complete except for a refuge siding near "B".

Note 3. The refuge siding must be kept clear of trucks. The shunt may use it, but must be prepared to clear any trucks if the siding is required.

From the diagram, we will see that there are a number of other possibilities other than straight shunting which can be incorporated into our train running.

Example 4.

Our "yard" now looks like Fig. 1.

What can we do with this? We can shunt "A", "K" and "B" sidings on the "down"journey and "B" on the "up"trip. We could also shunt "A" & "K" on the "up" trip. The train sets back into 1. Cut off engine and run around, cut off van and trucks for "A"& "K". Proceed to "A" & "K" via 2 and main line. Pick up outwards trucks from "A" & "K" and place on main line. Set down trucks for "A" &"K". Return to train via main line and 2 placing trucks on east end of train. Engine returns to west end, tests brakes and is ready to proceed.

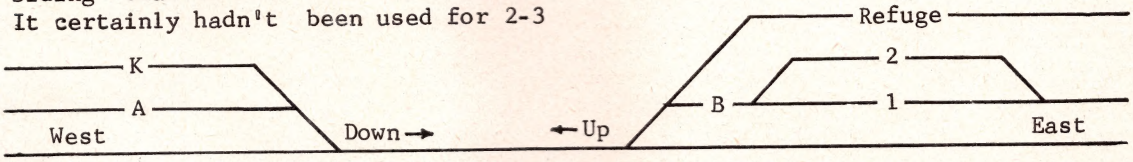


Fig.1.

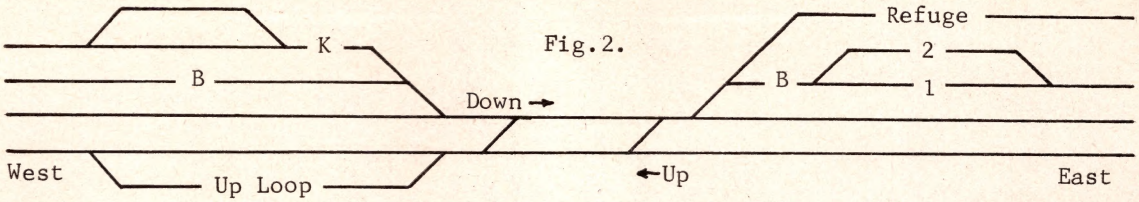


Fig.2.

There are numerous variations experience will show you, but let us leave our shunting there and consider some other moves we could introduce.

We have 3 stations "A", "B" & "C", ours is "B". The goods train on "up" has come from "C" to "B", shunted and is ready to proceed to "A". We could hold it and run a passenger train through on the "up" or "down" or both (not together though, we haven't a main line crossing loop yet).

It would be possible to terminate the goods and return it. This would be done as follows:

Our train is in "B" 1, engine west end, van east end. We 'run around" with engine, pick up the van and place it clear of the points on the west end of the loop. We then return the engine to the east end, couple up the engine and van, test brakes and when ready to go, push back to the main line ready to return to "C".

These moves apply equally to a goods from "A" to "B" using the loop on "K" siding.

One other move will suffice. We have a through goods running late and an express train following. We run the goods train into the refuge siding (push it if it is "up"), let the passenger run through. The goods then departs ex refuge siding.

We have by no means exhausted the possibilities of our yard, but by this you know almost as much as I do about it. Let us then consider our main line and siding as the down line of a double line section (see fig. 2.).

We have added two crossovers and a crossing loop. We can make any of the moves listed previously, plus cross trains on the "up" via loop. We can "run around" trains on the main lines or "up" loop and use the "up" loop to shunt from. These moves are similar to others listed so are not detailed. Many others are possible.

Let us then summarise this section. What have we done with the trains? Moved them forward and reverse on main line and across points. We have set down trucks, placed them and "run around" the train.

Everything else was a combination of these. "Running around" is a combination itself, but is listed separately, because if understood and mastered, opens up many interesting possibilities. NOTE. The running around with the van to terminate train. This could be done with a truck out of order, 1,2,3 with 2 required first.

Once these 3 movements are mastered the rest is ingenuity and concentration. A set up similar to "A" siding and a loop could provide plenty of interest and scope to start with. This will be developed fully in Part 3, Marshalling and Placing.

****

Editorial continued.

Ted Frost has written an article on this subject which will soon appear in Journal. However how about you taking a look around, with your camera, and let me have any photographs or descriptions of other "Model" features to be found on Australia.

KADEE OR NOT KADEE?

In N Gauge

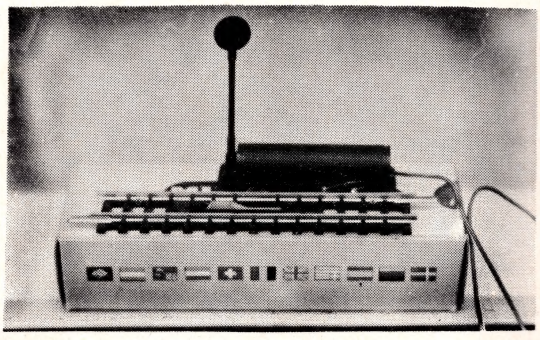
Photos by R. Batty.

by R. Batty.

On looking through the last six issues of Journal I noted only two articles on N gauge, and in the list of financial members only five who are modelling in N gauge. It is to this limited readership this article is aimed. (Or are there others, like myself, who have "forgotten" to return their layout registration form).

Top. Using "Kadee" N gauge couplers.
Bottom. Using "Standard" N gauge couplers.

Although in N gauge we are fortunate in having a standard type of coupler, it is a type that does not lend itself readily to remote operation. The main reason appears to be that only half the coupler needs to be raised in order to uncouple. Invariably, due to friction, the second half also rises just enough that uncoupling cannot occur,or in extreme cases both bogies lift clear off the track and derail. The units available (eg. Minitrix) requires precise positioning of the train to have any hope of operating. (The Minitrix requires positioning of the train within 1/8"). The only other type of coupler on the market is Kadee.



"Minitrix" uncoupler.

The Kadee coupler has the following

Advantages.

1. Three or four uncoupling magnets well positioned are enough for the largest yard.
2. They have a neater and more realistic appearance. (approx. 1/2 linear size or 1/4 volume of the standard coupler).
3. They enable cars to be coupled a scale 18" closer together.
4. They are body mounted which is more prototypical as well as giving more reliable performance, especially reversing through points.

Disadvantages.

1. Cost. The cost of mounting Kadee couplers is $1.00 per car. However,against this,if we consider a ladder type yard arrangement with six storage tracks off a common lead,one Kadee uncoupling magnet (cost $1.00) will do the same job as Minitrix (or similar) which, with switches to operate,

would cost $19.00. Consider a few sidings and perhaps another yard and the biggest disadvantage of Kadee doesn't appear as bad.

2. Size. Let's face it, if you run N gauge your eyesight can't be too bad. The hardest part to assemble is the very small centering spring, but some vaseline on the point of ar X-acto knife makes even this task relatively easy. Starting from scratch, it takes me about thirty minutes per car.

The uncoupling magnet is placed between the rails and cemented with Araldite or something similar. Eleven sleepers (Peco track) are removed to a allow the magnet to fit. The sleepers can be cut on the inside of the plastic "spikes" this automatically centres the magnet as well as maintaining some stability for the rails in the uncoupling area. The magnets can be disguised as a road or foot crossing. I use Lettraset 1/8" press on letters to print "No Standing" or "Keep Clear" notices on them.

I have not tried to explain how to mount couplers, the instruction sheet is very clear on how this is to be done, rather with this article and photographs I have tried to generate some interest amoung, and invite some comments from other N gaugers.

As a "footnote" I would like to comment on M. Snell's statement in May/June Journal about thyristor controllers that "the cheapest of these cost over $15.00 even when constructed at home". Without the inertia facility a thyristor controller can be built for $9.00 and the inertia circuit which can be added later will bring the cost to $13.00 to $14.00. I have now built three controllers of this type and in my opinion they are a must for realistic operation in N gauge.

****

Scratch Building for Beginners

by JACK GRIERSON

Preface

Recently, at NSW Branch, a modelling activity was introduced to encourage and assist AMRA members to build their own rolling stock. The object being to teach methods and techniques and to build the members' ability from being able to solder to being able to build a locomotive. Consequently the projects have been designed from a simple wagon, through a series of more difficult wagons.

Over the next few issues these projects will be published in the Journal and beginner and experienced modellers are invited to join in the project.

This is the first article in this series by Jack Grierson, a well known modeller of N.S.W. prototype.

TOOLS FOR THE SCRATCH BUILDER.

It is pleasing to see kits of rolling stock and ready to run locomotives of Australian prototype in HO scale on the market in N.S.W. and other states. The manufacturers and importers are to be congratulated for their part in helping us in our hobby. However there is always that certain loco or wagon we would like that just isn't available in the hobby shop and the only way we can have it is to make it ourselves. With this in mind, let's discuss the tools needed to scratch build locos or wagons.

One main item is a metal cutting lathe, but I shall leave this for a future article as a lathe is not necessary for most of these projects.

A drill is the next main item needed an electric one, or a good hand drill will be satisfactory. A drill stand for the electric drill would be most helpfull, for it is important to be able to accurately drill holes. A set of H.S.S. drills up to a ¼" as well as some number drills are also necessa ary. A number 60 drill for handrail stanchions, a 50 and 55 for clearing and tapping holes for 10 BA screws would be a start for more can be added as needed to complete a full set. Store drill bits in a container so they will not be lost.

Taps and dies are another item that can be added as needed with the 10BA and 12BA being most prominent. A tap holder or a pin vice is needed to hold taps for cutting threads.

A good vice is essential. Perhaps a 3" to 3½" engineers type mounted on a bench. A small type that can be used on the table is also helpfull. Now we need something to cut sheet material to various shapes and sizes. Tin snips are useful, but are not good because they twist and curl the metal, so a piercing saw is needed (Eclipse brand or similar). There are two types of saw frames available, solid and adjustable. The adjustable type is the best as some of the broken blades can be reused, and believe me a large number of blades get broken. The blades come in various grades from fine to coarse in bundles of 1 dozen. A selection of fine, medium and coarse grades is convenient for different grades of materials. A hacksaw is needed for heavier materials.

For finally shaping materials a large selection of files is needed. Files come in different sizes and grades of cut, and a good general size is an 8" type. As for grade, a coarse flat file for removing large amounts of metal and a fine one for final finish is require A half round and round file would complete the collection of large files. Needle files are also needed and these come in many grades of cut, shapes and sizes. A flat, half round, round, square and a knife would be enough for any shape to be filed. Number 0 is the coarse cut to Number 4, the fine cut.

A soldering iron is essential along with flux and solder. An electric iron of 60 or 75 watt rating will do, while a small butane or gas tank is helpful for some jobs. A selection of soldering tips will be useful, with a small fine tip essential for fine work.

A pair of pliers, a pair of long nose pliers and a pair of tweezers are handy for holding fittings, especially for soldering.

For marking out, a steel rule with millemeter measurements is helpful, but as most measurements in the following articles will be given in feet and inches, a rule in the modellers scale would be advisable.

A small square, a scriber, and a set of vernier calipers are necessary. Several small screw drivers of varying sizes, with two or three small clamps will assist with assembly work. A small emery wheel and an oil stone will help keep tools sharp, for sharp tools make work easy.

That just about completes the list of tools needed for scratch building and at a glance one can see the list is both formidable and expensive. If you buy a few tools at a time, you do not notice the expenditure. I may add that the cost of tools is overshadowed by the number of items one can build, saving on the purchase of expensive brass items.

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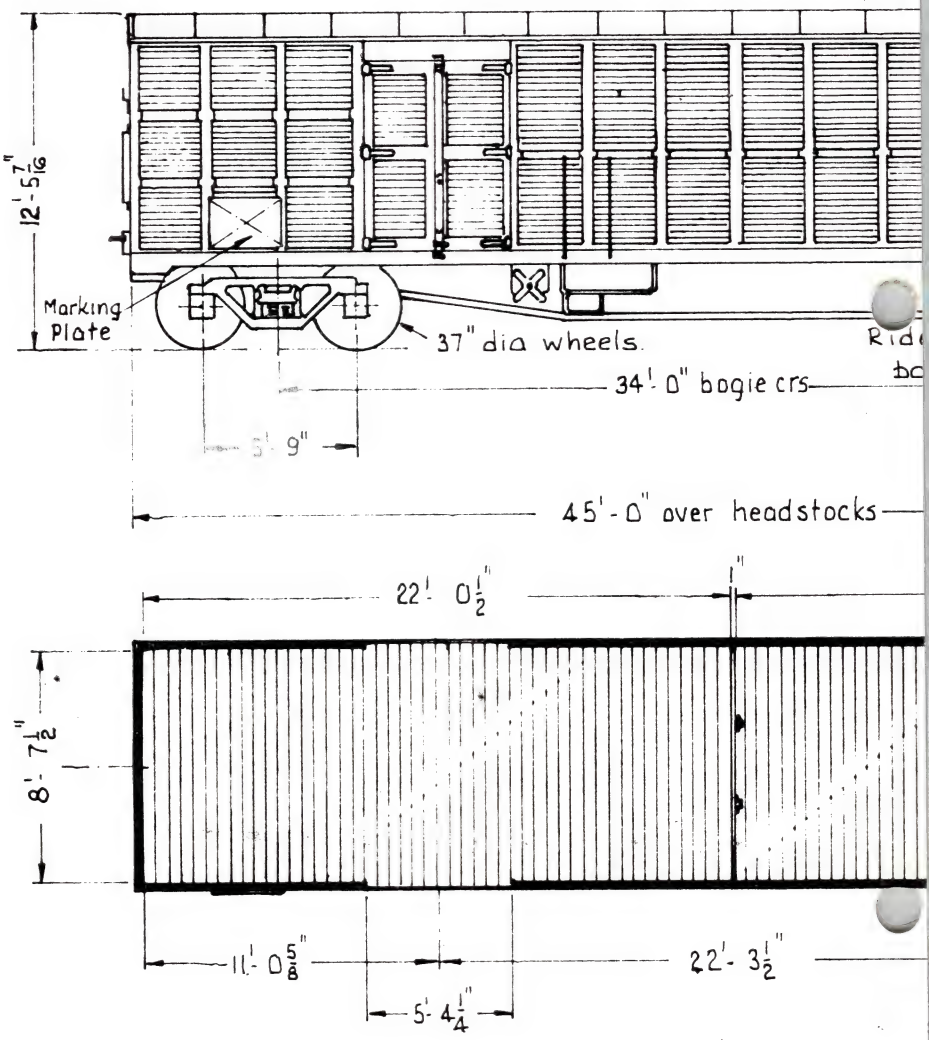
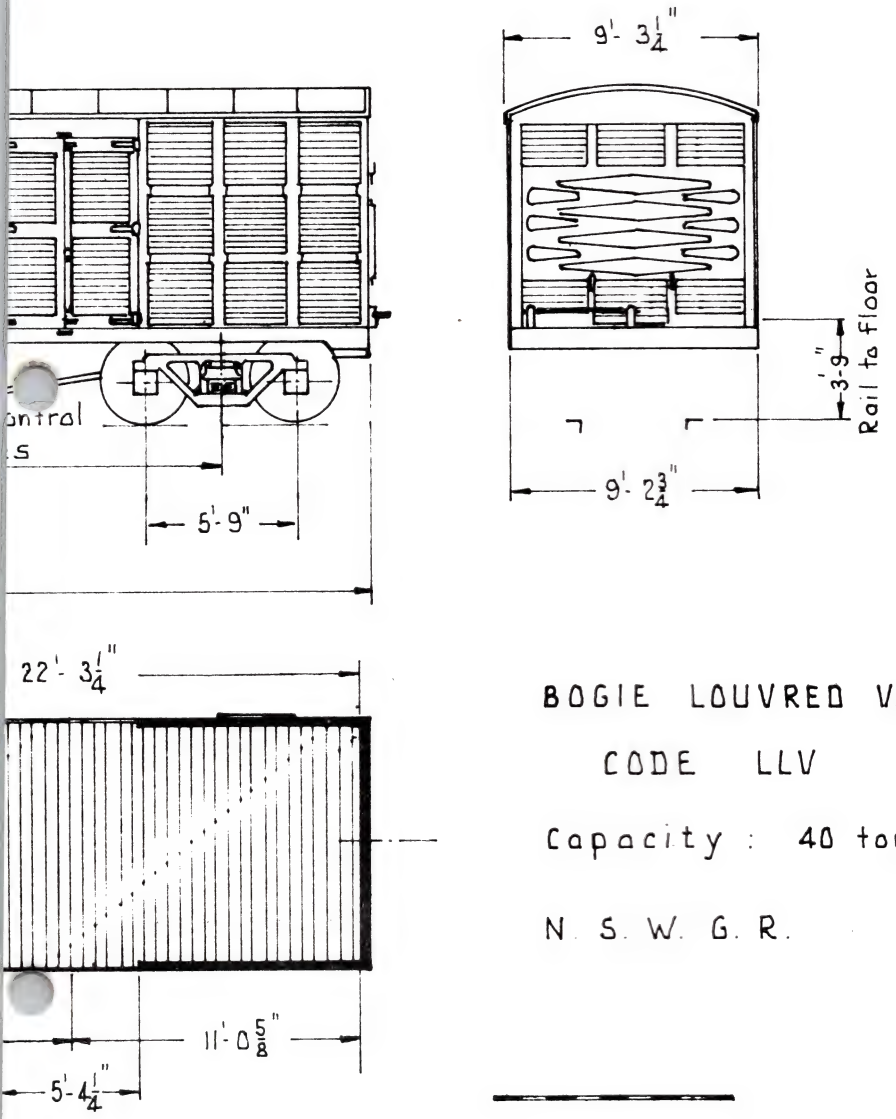

12'-5 7/16"
Marking Plate
37" dia wheels.
34'-0" bogie crs
5'-9"
45'-0" over headstocks
22'-0 1/2"
8'-7 1/2"
11'-0 5/8"
22'-3 1/2"
5'-4 1/4"



BOGIE LOUVRED VAN

CODE LLV

Capacity : 40 tons.

N. S. W. G. R.

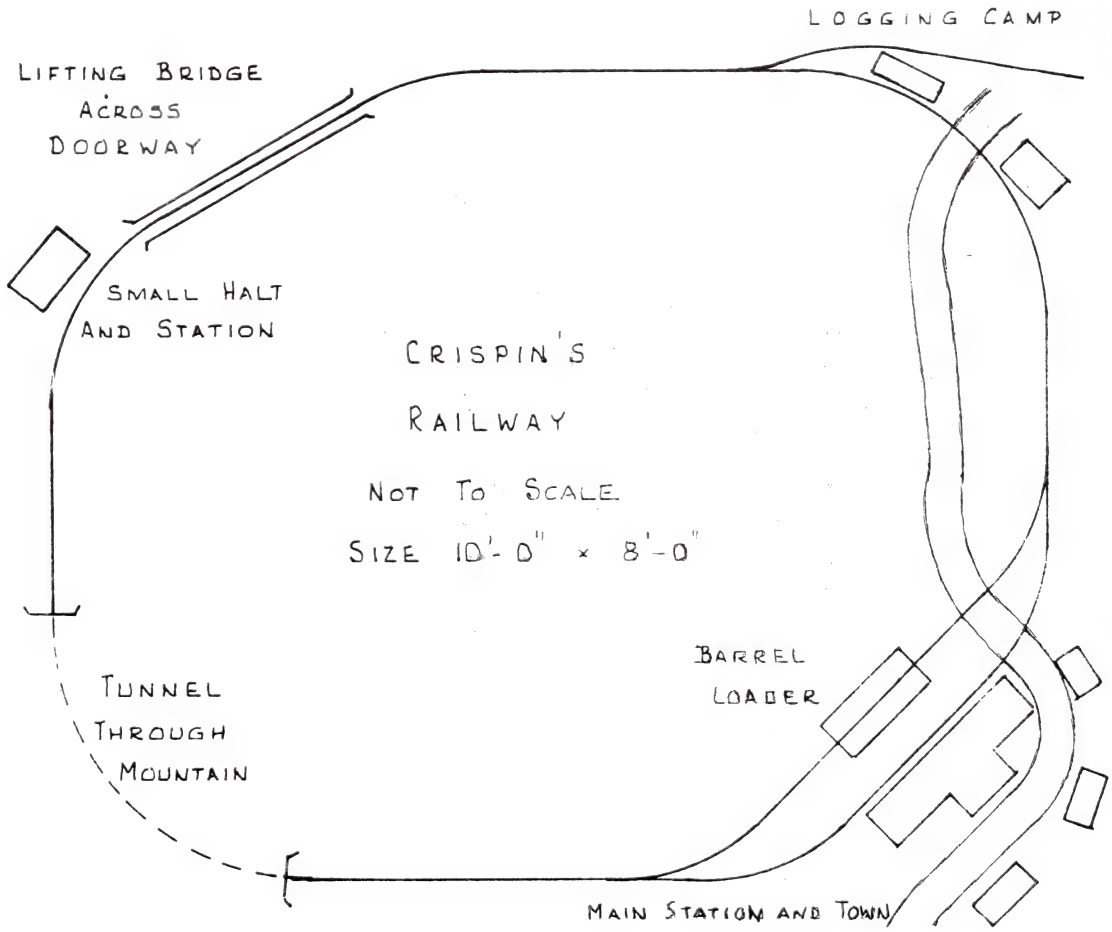
Feet

CRISPIN'S RAILWAY

by R. Gutteridge.

Last year my youngest son Crispin was nine years old and was showing a lot of interest in my "O" gauge Crooked Creek Railway. He already had some Triang O gauge equipment, but needed somewhere to set this up permanently as the Big Big track tended to warp and twist if just laid on the floor and nothing causes lessening of interest and increase of frustration quicker than constant derailments.

Next to the garage there is a cubby house, 10 feet by 8 feet, already occupied by my second son Simon's H.O. layout, but with a little squeezing there was room for a shelf around the walls. This was made from 1 inch thick pine board which was easy to work and very strong. The pieces were bolted together with coach bolts and well braced underneath to give a shelf that would withstand most juvenile assaults.



The line is essentially an oval. In one corner is a town with a passing siding on which is situated the Triang barrel loader - a fascinating accessory, which has given lots of fun. A further siding with a logging camp occupies the next corner, while across the lifting bridge,usually kept closed for safety reasons, is a small halt with a most dilapidated station building. The line then proceeds through a tunnel under a hill to return to the main station again.

Buildings on the line are made of balsa and were made from the town cut-out book put out by the Railroad Craftsman some years ago. Most of the figures and accessories such as barrels, fences, cars, animals etc. come from Blue Box sets of models, the Grand Prix, farm and service station kits being especially useful here. These sets are very good value and a very useful source of O gauge items.

The line owns a Hymek diesel and an 0-4-0 steam type loco, a passenger coach,one bogie and two 4 wheeled open wagons and a couple of side tipper trucks. There are also some Hornby tinplate wagons and an odd clockwork loco or two that can be used with the Triang stock if a little ingenuity and some wire is used. The Triang locos need little maintenance and are always ready for use. The consumption of batteries is not very heavy, far less than are required for the children's electric torches. And there is never any need to clean the track, there are no short circuits and there are never any broken electrical connections. I keep a couple of the Triang 0-6-0 diesels on my own layout. These have been fitted with scale couplers and have had their height reduced and I find them very handy on occasions when I can't be bothered to connect up the power. They can also be used to enliven an operating session if they are used to haul an express train which must not, indeed cannot, be delayed by other trains. It certainly makes other trains seek the safety of a siding in plenty of time.

Generally Crispin's railway has been a great success and plans are now afoot to rebuild it with a Wild West setting. Fort Courage, the home of that splended body of men, F Troop, is expected to rise in one corner soon and no doubt trains will soon have to fight their way through Indian ambushes. The fact that the large O gauge equipment is the right size for most toy soldiers, cowboys and Indians,makes it a very suitable size for this age group,especially as the models are very strong and are always ready for use. However to maintain interest, there must be at least a couple of pairs of points tc allow the train to do something else than chasing its tail in endless circles.

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FOR SALE

Members are advised that Bill Morehouse has for sale Triang new and unused loco and wagon bodies suitable for conversion to scale models, and scale drawings of the NSWR C32 loco. Also Eric Doherty has for sale official AMRA tie bar and cuff links for sale and Ken Down has old model railway magazines for sale. Profits from all these sales go to Vic. Branch funds.

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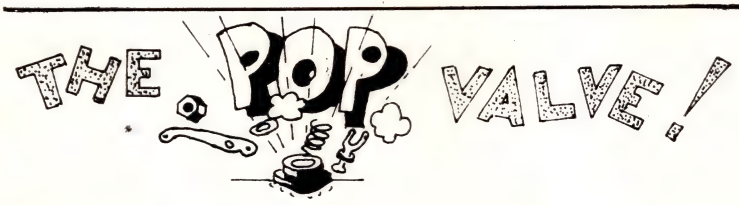
NOTICE



FOR READER'S LETTERS

The Editor,
AMRA Journal.

Dear Sir,

While reading the book "Articulated Locomotives" in which the author mentions proposed but never built locomotives, several questions stuck in my mind and I wonder if you or your readers could help me with the answers.

What constitutes a freelance model? If a design for a locomotive or piece of rolling stock is propose but the item was never built, yet a model of it is made, is this model freelance, a model of a prototype or is it actually the prototype?

If a railway modeller designs a piece of rolling stock or a locomotive for his layout, is his model freelance, a model of a prototype, or is it the full size prototype?

If a modeller designs a wagon for his layout and the design is later used on a full size railway, which is the model? the one on the layout or the one on the full size railway? If the modeller is working in, for argument's sake, 7mm to the foot and builds an open wagon for his layout. He exhibits this wagon where it is seen by say, the Commissioner for the Victorian Railways who likes the design so much that he introduces it to the Victorian Railways. Now is the 7mm wagon a freelance model or is it a model of a prototype wagon or is it the prototype? If a model of a prototype wagon, would the V.R. wagon be the prototype? If the miniature wagon is the prototype would the V.R. wagon be a 12 inches equal 7mm model?

I would like to learn your views or the views of my fellow Journal readers on this matter.

ERNEST F. RADDATZ.

Ed. - I'm thoroughly confused - How about our readers?

The Editor,
AMRA Journal.

Dear Sir,

Goulburn Steam Museum.

The man most responsible for the museum and the engine driver is manager, Bruce MacDonald.

The museum is well worth a visit and members will find the collection of tin-plate O gauge interesting. Most are vintage Bassett, Lowke, Marklin, Hornby, Bing, etc. The rarest however is a scale model of a Shay loco made of wood with working parts by Edwin Chase of New Jersey, U.S.A.

A small Marklin layout is also in operation for the benefit of children.

The collection of photos of vanished private railways is unique, particularly those of the timber mills.

There is also a particularly interesting collection of volumes of Railway Design and Practice, written by a Mr. Stephenson over a century ago.

For the shutterbugs, three 50 class locos are still shunting in Goulburn yards.

The following has been taken from a brochure given to me by the manager.

GOULBURN N.S.W.
MARSDEN MUSEUM AREA.
MUSEUM OF HISTORIC ENGINES & SCENIC RAILWAY.

This 24 acres of land and water set on a bend of the Wollondilly River is being developed by the City of Goulburn as a contribution to the national heritage of Australia in its industrial and commercial progress.

In 1883 a site for the storage and pumping station of Goulburn's reticulated water supply was chosen to be situated a few hundred yards upstream on the left of the bridge. A weir was built and both the bridge and the weir took the name "Marsden" from a local landholder. A steam driven pumping engine was installed in a brick building adjacent to the held water.

Electric pumps were installed in 1918 and in 1932 in annexes to the original building and the steam engine was not used again.

During 1957 a Sydney engineer interested in the preservation of engineering history gained permission to voluntarily restore the steam pumping engine. This was achieved and thereafter, during the Lilac Festival celebrations in Goulburn each year the engine was exhibited working under its own power, thus Goulburn achieved the rare world distinction of having an original installation becoming a working industrial museum. Soon after other items of steam powered equipment were offered or acquired and each year saw the restoration and exhibition of yet one more exhibit. This continued until 1968 when the originator realised that the number of exhibits and the rate of their offering was beyond the time and resources available. A decision was made to promote the venture as a city project and develop it as a tourist and cultural centre.

The overall concept was that the natural features of the area - the expanse of water, the craggy mountain with its coloured rock, the willow lined banks, the pine lined access road and the very seclusion of the place - would make an ideal and unique location at which the visitor could remove himself from the present day and indulge in whatever mood was desired, be it nostalgia, entertainment, education, amusement or relaxation.

Previously, exhibits have been of steam powered equipment. In future, equipment of many industrial trades and callings will be involved and whilst the steam engine will not be overlooked, it will be an accessory rather than a principal. Attention is being given to industrial and commercial exhibits mainly because of the general lack of recognition so far given to a facet of life to which we as a nation owe so much and of which we as a people know so little.

It is planned to recreate complete working exhibits incorporating actual equipment used in the respective processes.

A working museum of this nature is unique in Australia and will be one of the important few in the world. Its expansion will be continuous, it will never be finished.

The SCENIC RAILWAY was built only for the project and the little locomotives and carriages collected from a wide area of redundancy. The line has a dual purpose in that it serves as an attraction for young and old at present, but later when the patronage of the area necessitates the exclusion of cars used as a means of transport from a car park outside the area. It is hoped that one day, dependent on interest shown, the line will be extended.

ADMISSION CHARGES.

MUSEUM:- Adults 30¢, child 10¢.

RAILWAY:- Adults 20¢, child 10¢.
(return fare)

ADDRESS - Marsden Museum Area, Crookwell Road, Goulburn, N.S.W.

LOCATION - One mile from Goulburn's main street, on the Crookwell Road on the left immediately before it crosses the Wollondilly River.

OPEN - Daily, 10.00 a.m. until dark.
Note - In winter months the main exhibits only work during week-ends.

1. Picnic & barbecue area.
2. Train terminus & railway
3. Museum area gates & road.
4. Wollondilly river.
5. Marsden Wier
6. Site of proposed gold mine and museum.
7. Site of proposed lookout on Rocky Point.
8. Fowler ploughing engine 38 tons
9. Aveling steam roller - 8 tons.
10. Entrance - Museum of historic engines
11. Fowler steam roller - 10 tons.
12. Sentinel steam wagon.
13. Harwood portable engine.
14. Page overhead engine.
15. Fowler ploughing engine 25 tons.
16. Hick - Hargreaves mill engine.
17. Watt boiler.
18. Lancashire boilers.
19. Appleby pumping engine
20. Display room
21. Present Day water pumps.
22. Parking area.
23. Riverside area.
24. Proposed brickworks and museum.

The Editor,
AMRA Journal.

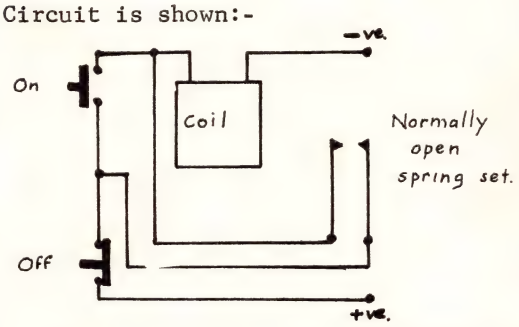
Dear Sir,

I am not on the advisory panel, but failing that august body, can I be permitted a few comments on Mr. Sloggett's request for a 100 contact switch.

I think it is unlikely that Mr. Sloggett will find a 100 contact switch. It is not simply a matter of electrical considerations, but also the considerations of the sheer mechanical effort (perhaps "shear" would be a more appropriate word) required to operate that many contacts.

However, it is possible to control any number of contacts with relays operated by push buttons.

Circuit is shown:-



This circuit also has possibilities for automatic control of single line layouts. Read FORWARD and REVERSE instead of ON and OFF.

JACK PARKER.

The Editor,
AMRA Journal.

Dear Sir,

In reply to Stewart Sloggett's request for a switch to "switch on and off 100 circuits" (Refer July/August Journal).

I am rather intrigued by such a request, as I can't imagine a model railway application for such a switch. If for example, 100 lights had to be switched on and off simultaneously, then they could be connected together and switched by a single switch. However, I'll presume that this is not the case.

There was such a switch used in telephone exchanges "many moons" ago. It was known as a "claw" relay. It was rather like a frayed mushroom or umbrella. The top of the mushroom was divided into about 100 radial arms which were pulled down by a solenoid onto about 100 fixed contacts arranged in a circle. I won't dwell on this as Noah's Ark has long since sailed.

A second, and probably the most practical solution, assuming that the switching must be simultaneous, is to use relays.

Post Office type 3000 relays are available from member Ron Bennell at about 40¢ each. You would need 13 relays, each with the maximum contact arrangement of 8 M units (or 6 M and 2 C units). This would give 104 completely separate single pole switches. These contacts will switch up to one amp. each without undue wear. The coils will depend on the power source. Ron will supply coils to suit the voltage in the request. 8 M units on each relay could be a tall order on Disposals" stock. Stewart may have to settle for a few more relays with less contacts on each. One advantage of this scheme is that all or part of the "switch" can be remotely controlled, which cuts down on wiring.

Another trick used more today in telephone design is to use diodes, but this scheme is limited to D.C. One only switch connects via 100 separate diodes to the 100 devices, and the diodes prevent any coupling between the devices. In new work, this is cheaper than relays, but with new one ampere diodes at about 30¢ each, the 13 relays from disposals would be cheaper.

If the switching does not have to be all simultaneous, then PMG lever key switches can be used. I use this scheme on my own railway to "switch out" minor stations. By using the largest size key(4 C + 4 C) right from one side to the other, 8 circuits can be switched with one key. Stewart would need a bank of 13 keys. Up to 3 keys can be connected mechanically by connecting the levers together with a metal or plastic bar in lieu of the knobs. Beyond these schemes, the OAK type wafer switches could do the job by stacking, as he says. A "wafer" can be purchased with 6 M contacts, and having two positions. A standard OAK switch (No. AK 19236)comes with three such wafers,and would cost about $4.00 trade. This would of course be only 18 M switches. A special switch could be made with 17 wafers (giving 102 contacts) but one may need a crank handle to turn it.

Summing up, it appears that relays are the best and cheapest answer.

ALLAN DOWEL.

The Editor,
AMRA Journal.

Dear Sir,

I am happy to concede that some of the points made by Mr. J. Parker are probably quite correct, from a fine scalers point of view. It is fully appreciated that the primary purpose of the N.S.W. Branch layout is for the running of N.S.W. prototype whilst at an exhibition. I don't think anyone will argue the point on that score.

Mr. Parker says this rule does not apply at Branch meetings, then further on we read in another paragraph and I quote "If a modeller puts a train of scratch build vehicles on the track and along comes someone with a train of un-modified Triang, (or worse yet, an unappreciative youngster with a train of unmodified plastic Triang), the fellings of the modeller are a bit hard to describe and remember we are going to lose the dabbler anyway and we can't afford to lose the modellers."

The above statement is, I think, a reflection on all AMRA members that are not scratch builders or fine scalers. It also bears out my assumption that the Branch layout was built solely to suit the so called hierarchy of model railroading.

May one be forgiven for thinking that if Mr. Parker had his way there would be means test to join AMRA. Only those with certain qualifications would be eligible for membership.

It would be interesting to find out how many of the so called "dabblers" are in AMRA and how long they have been members. From what one can gather the term "dabbler" seems to apply to all members who buy proprietary brands over the counter, with the exception of those who buy N.S.W. or Australian prototype.

I think that if we limit the AMRA membership to the real modeller in the true sense we would have a very small membership, but one must realise you can't have quality and quantity.

There are perhaps a lot of reasons why certain members purchase model trains over the counter, and why they can't afford fine scale trains, those members still like to run their trains and get just as much enjoyment out of running them as the man with the fine scale.

I don't think the coarse scaler is interested in bringing the fine scaler down to a coarser level, but I would like to remind Mr. Parker that we are talking about a CLUB layout. Since there isn't a prerequisite qualification to becoming a member of AMRA, one would naturally assume that a club layout as such would be there for the

use of all members, without the member having to turn to fine scale.

As to whether universal points with open frogs are an engineering impossibility, there I must plead ignorance. This is getting too technical for me, and I must make use of the Advisory Panel and ask their advice on this matter. If this is a fact, a heck of a lot of layouts should not be running at all.

Again I must say apart from track, or should I say the type of track used, full marks must go to the Branch layout and the men behind it.

BOB PAYK.

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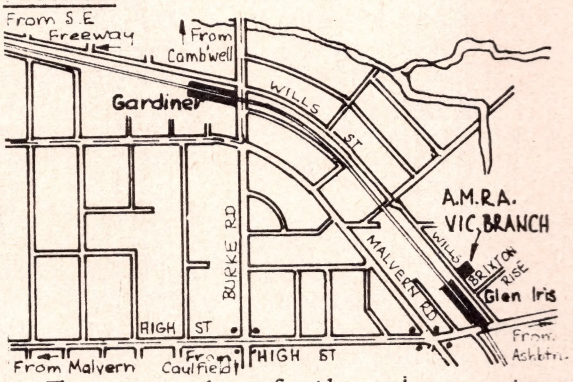
Branch Reports

VICTORIA.



The two major forth-coming events are the move, if the gods are willing, to our new clubrooms and the AMRA 21st Birthday Convention. With a bit of luck we should be holding the 9th Sept. meeting in the finest model railway clubrooms in the southern hemisphere at 92 Wills Street Glen Iris, commencing at 8.00 p.m. This building is situated opposite the Glen Iris railway station and as usual visitors, country and interstate members will be made most welcome.

Melbourne at Easter 1972 will be the venue for the 21st Birthday Convention of the Association and a full programme of events has been arranged. It will be an event surpassing all other model railway conventions ever held in Australia and Branch members wishing to participate should contact Mal Baker as soon as possible. Interstate members are advised to contact their Branch Secretaries as soon as possible also, members living in areas where we have no branches should contact Mal Baker or myself.

Two other events worth noting are the Annual Moomba Exhibition held during the Moomba Week in Melbourne (over the Labour Day Long Weekend) at the Camberwell Civic Centre. The 1972 Exhibition will be held from the 10th to 13th March inclusive. Model railway enthusiasts who will be visiting Melbourne next March should remember these dates; also any club or firm wishing to participate should make the necessary arrangements now. The second event is a one day exhibition to be held at St. Davids Hall, Glenhuntly on November 6th. This will be an all railway modellers show and should be worth visiting.

Branch meetings are held on the 2nd Thursday of each month with usually a talk, film night, auction night or some other item of interest as the main event. Now that we have our own clubrooms we will be holding running and/or work nights on the club layouts once or twice a month as well. There are model building or photographic competitions each alternate month at the meetings and our very active Social Organizer has a good programme of social events to satisfy the majority of the members.

Members are also requested to note that the library is open both before,

and after the meetings. Please remember the rules concerning the library books. These books must be returned to the library after one month or it hits your pocket.

THE "OLD VIC." WELCOMES ALL MODEL RAILWAY ENTHUSIASTS ---- BOTH DABBLERS AND RIVET COUNTERS.

The Victorian Branch gives a welcome to all. Although the AMRA stands for fine scale modelling we feel that there is a place for what we may call, for want of a better term, the tinplater. The junior or adult who comes along with his "unmodified plastic Triang" is just as welcome as the "rivet-counter" but he is encouraged and given every reasonable assistance to change to fine scale modelling.

Of course, during exhibitions scale models of Australian prototype only run,but our layout is designed to take coarse scale as well so everybody gets a go on ordinary running nights and if some don't like it, well hard luck to them. But we don't relegate the coarse scalers to the outer darkness as letters to Journal Pop Valve may suggest.

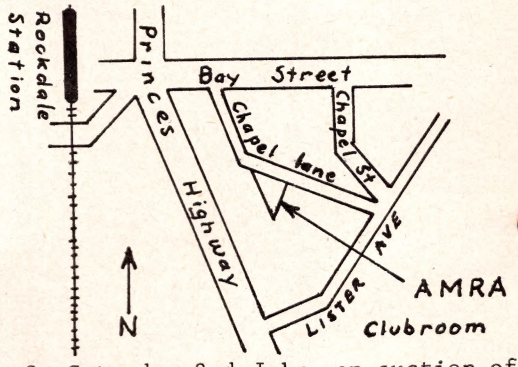
To encourage fine scale modelling we have a Scratch Building Sub-Branch and all Branch members wishing to try their hand at building their won models are requested to see Howard Armstrong.

COUNTRY MEMBERS TAKE NOTE. As we now have our own clubrooms we are looking into the matter of Saturday or Sunday meetings several times a year to enable our country members to meet their "City slicker" opposite numbers and so forth. If any of our country members (and our metropolitan members for that matter) have any suggestions would they please get in touch with the Branch Secretary. Also if any of the country members are planning trips to the Big Smoke they should plan their visits to take advantage of the various Branch Social Activities. Contact Mal Baker, our Social Organizer, and advise him when you are planning your visit to the city.

14th October. Talk on scenery by Mr. K. Nelson. Competition is for wagon, van or coach from drawings and/or articles that have appeared in Journal over the last twenty-one years.
23rd October. Rail trip to Wonthaggi leaves Spencer Street Station at 9 a.m. See Mal Baker for details and bookings soon as there are only a few seats left.
11th November. Hints, tips and queries is the agenda for this night although this may be altered. Competition has not been chosen at this time but will appear on the clubroom notice board.
20th November. Barbeque on our tennis court,Country and/or Western theme and you must come in costume. Mal Baker for details.
9th December. Xmas Party and film on the "Western Endeavour". AS WELL AS THE TRIBUTE TO THE TREASURER YOU MUST BRING A PLATE OF GOODIES TO GET IN. Competition is any Australian kit, past or present, but NO repeat NO kit conversion or scratch building.
11th December. Xmas Social in our clubrooms,more details about this from Mal Baker.

ERN RADDATZ.

NEW SOUTH WALES.



On Saturday 3rd July, an auction of surplus railway & modelling equipment was held at Rockdale. Phil Kelly as auctioneer and John Skilton as penciller did a fine job and quite a lot of goods were sold resulting in a tidy

sum of money (sales commission) going to Branch funds.

Friday 9th July, a great number of members are showing a tremendous interest in these modelling activities nights. The attendance at these nights has risen to around the 50 mark. The projects that have been worked on will possibly be seen at the Exhibition.

The working bee on Saturday 14th July was spent attending to the duties which need to be done outside normal club activities. The roof supports were put into place by George Bray and Norm Read, whilst other duties such as painting and erecting another bulletin board were carried out by Allan Brown, Graham Ball, Laurie Lumsden and Ron Gray. Thank you fellas for your support.

A good crowd turned up on Friday 23rd July, to see Colin Gilbertson's slides of Steam in Vic., NSW., W.A. & New Zealand. Colin has quite a vast number of slides and anyone who has not seen them have certainly missed something worthwhile,also Colin's commentary keeps you well informed on the movements of a number of steam locomotives. I heard a whisper that Colin can even tell you what the driver had for lunch!!! (Is this true Colin?).

Twenty people attended the AMRA dinner on Monday 2nd August, at the Bankstown Sportsmans Club. These social evenings are arranged for members and their wives and to the best of my knowledge a good night was had by all who attended. The food was excellent and so was the company.

The scenery demonstration on 7th August, took the form of the start of a face lift for the U-drive layout for the Exhibition.

Most of the club activities are attended by one or more of the ladies-auxiliary, who bake the goddies we have with our afternoon tea. Thank you ladies for your help and concern.

With the Exhibition only a few weeks away, as I write this, you no doubt have received your roster forms for Exhibition duties. If you have not done so as yet, please fill these in and give as much of your time as possible, and return them to the Roster Clerk, Brian Day. It is only with the members' support in attending to the tasks connected with the running of the Exhibition that success can be maintained.

October.

Sat. 2nd to Mon. 4th MODEL RAILWAY EXHIBITION, Sydney Lower Town Hall.
Fri. 8th Modelling & Layout Operation.
Sat.16th Post Exhibition Discussion.
Fri.22nd Federal Annual General Meeting - Rockdale Clubroom.

November.

Sat. 6th Auction - Make this your pre-Christmas clearance.
Fri.12th Modelling & Layout Operation.
Sat.20th Visit to Bankstown Live Steam Society - Hoskins Av.B/town.
Fri.26th Slide Evening.
Sat.27th Annual Dinner - contact Sec. or Pres. before 1st Nov.

JOHN DUNN.

News From Other Clubs

PROSPECT MODEL RAILWAY CLUB.

The Third Annual General Meeting of the above club was held at the Blacktown Scout Hall on Saturday the 24th July, All except two financial members were in attendance. The two absentees were both away on duty with the armed forces and sent their apologies.

The elected officers for the next twelve months are:

President	Keith Wilcox.
Vice-President	Warren Baker.
Secretary/Treasurer	Mike Guest.
Committeemen	Tony Young.
	Bob Payk.

Sam Stowe was elected a Trustee, following the resignation of Phil Knife, who is at present "carrying on" in Canberra, and felt that he was unable to carry out his duties as a Trustee from such a long distance. The other Trustee is Bob Payk.

A start has been made on our clubhouse, which will measure 30ft x 30ft. Three Saturdays each month will be spent on building the clubhouse and it is hoped that it will be ready for occupation by Christmas 1971.

The present club membership stands at 21 financial members including two juniors, plus the wives of the members who are all honorary members, with no voting rights. After the A.G.M. a film of the "Western Endeavour" was shown, drawn by the two 38 Class locomotives, by courtesy of Rodger McKenzie, who also did the filming of it from Sydney to Bathurst, as well as the trial run Sydney - Goulburn return.

Everyone enjoyed the film tremendously. Also shown was a film of our club's first exhibition, it was also well received amid some savoury comment.

Members officially voted that the 1972 Exhibition by this club be held at the Blacktown Civic Centre. More on this in due course.

BOB PAYK.

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